

Silico-Phosphates and Di-Calcium Orthosilicate,  
by L. M. L. Booth, K. Erler, R. Klement.

GERMAN, per, Z Anorg Chem, Vol CCLVII, 1948,  
pp 173-179.

DSIR/30509/CT

Sci - Chemistry  
Feb 58

58, 864

Reihlen, Hans.  
HYDROXYCARBOXYLIC ACIDS AS COMPLEX FORM-  
ING AGENTS. I. COPPER-ALKALI-TARTRATE AND  
THE SCHWEITZER'S REAGENT. [1955] 8p.  
Order from SLA \$1.10

62-16536

Trans. of Zeitschrift für Anorganische Chemie (East  
Germany) 1948, v. 257, p. 340-348.

DESCRIPTORS: Chemical analysis, \*Tartrates,  
Succinic acids, Phenols, \*Hydroxides, Solubility,  
\*Cellulose, Copper, \*Carboxylic acids, Reagents.

(Chemistry--Analytical, TT, v. 9, no. 5)

62-16536

1. Title: Schweitzer's  
Reagent
- I. Reihlen, H.
- II. Title: Copper-alkali-tar-  
trate . . .

Office of Technical Services

On the Diffusion of Oxygen in Ag and AgCu Alloys,  
by K. Hauffe,  
GERMAN, per, Zeit Anorg Chem, Vol 247, 1948,  
pp 279-288,  
\*Nat Bur Stand TT 70-57814

Sci-Chem  
Jul 70

Jander, Gerhart and Wendt, Hildegard.  
FUNDAMENTALS OF A CHEMISTRY IN ABSOLUTE  
NITRIC ACID. II. SOLVOLYSIS REACTIONS AND  
AMPHOTERIC PHENOMENA. 15 Dec 61, 23p. 18 refs.  
Order from SLA \$2.60                      63-10560

Trans. of Zeitschrift für Anorg[anische] Chem[ie]  
(East Germany) 1949, v. 258, p. 1-14.

DESCRIPTORS: \*Nitric acid, \*Solvent action, Cadmium  
compounds, Zinc compounds, Acetates, Potassium com-  
pounds, Lead compounds, Nitro radicals, Phenols,  
Silicon compounds, Chlorides, Phosphorus compounds,  
Oxychlorides, Uranyl radicals, Nitrates, Perchlorates.

It is shown that solvolysis reactions take place in abso-  
lute nitric acid also, just as they do in other anhydrous  
but "waterlike" solvents; and indeed the type of solvolysis  
reaction in nitric acid is predominantly the same as  
(Chemistry--Inorganic, TT, v. 10, no. 2)                      (over)

63-10560

1. Title: Amphoteric substances
1. Jander, G.
- II. Wendt, H.
- III. Title: Solvolysis...

Office of Technical Services

On the Binary Systems of Titanium With the Elements  
Nitrogen, Carbon, Boron, and Beryllium, by P.  
Ehrlich, 35 pp.

GERMAN, per, Z fuer Anorg Chem, Vol CCLIX, 1949,  
pp 1-41.

SLA 57-2852

ACSIL Tr 797

Sci - Chemistry

Aug 57

51, 768

OSR/3052/ST

62-18213

Schäfer, Harald.  
STUDIES ON THE  $Fe_2O_3-FeCl_3-H_2O-HCl$  SYSTEM.  
I. [INFLUENCE OF HYDROGEN CHLORIDE ON  
 $\alpha$ -IRON OXIDE]. [1962] [43]p. 25 refs.  
Available on loan from SLA

62-18213

Trans. of Zeitschrift für Anorganische Chemie (East  
Germany) 1949, v. 259, p. 53-74.

DESCRIPTORS: \*Hydrogen compounds, \*Chlorides,  
\*Iron compounds, \*Oxides, Chemical reactions,  
Chemical equilibrium, Temperature, Dissociation.

Experimental studies were made of the equilibria  
which were reached following the action of HCl on  
 $\alpha$ - $Fe_2O_3$  between 300 and 1000°C. The methods of  
the equilibrium measurements are described and the  
accuracy of the results is discussed. The reaction  
equilibria  $Fe_2O_3 + 6 HCl \rightleftharpoons Fe_2Cl_6 \text{ gas} + 3 H_2O$   
(Chemistry--Physical, TT, v. 8, no. 9) (over)

I. Schäfer, H.  
II. Title: Influence...

Office of Technical Services

Au X-Ray Study of the Systems Tl/S, Tl/Se and Tl/Te,  
by H. Hahn.  
GERMAN, per, Zeit Anorg Chem, Vol 260, 1949,  
pp 110-119.  
\*Nat Bur Stand TT 70-57812

Sci-Chem  
Jul 70

A Contribution to the Chemistry of the Tungstates,  
by Inge Rabes, Rudolf Schenck, 30 pp.

GERMAN, per, Z Anorg Chem, Vol CCLIX, 1949, pp 201-219.

AEC Tr-5125

Sci - Chem  
Aug 62  
List 71

206,082

Fluoro-Complexes I: Iron, Cobalt, Nickel  
and Copper, by Wilhelm Klemm, Enno Huss,

6 pp.

GERMAN, per, Z. Anorg. Chemie, 1949, pp  
pp 221-226.

Dept of Navy Tr 4470/ONI Tr 2050

Sci-Min/Met

Feb 66

296,226

Further Studies on Crystalline Rare-  
earth Hydroxides, by R. Fricke, W.  
Kurrwachter.  
GERMAN, per, Zet. Anorg. Chem.,  
Vol 259, pp 303-308, 1949 9229638  
AEC ORNL-Tr-660

Sci-Chem  
Oct 65 290,609

The Chemistry of the Condensed Phosphates and  
Arsenates. II. The Structure of Sodium Tetramete-  
phosphates and the Properties of the Tetraphosphates,  
by Erich Thilo, Rudi Ratz, 17 p.

GERMAN, per, Zeitschrift für Anorganische Chemie,  
1949, Vol CCLX, pp 255-266.

SLA 59-17291

Sci  
Jan 60  
Vol 2, No 8

105,572

The Chemistry of Condensed Phosphates and Arsenates,  
Pt 3, The Manufacture and Properties of Meta-Arsena-  
tophosphates and the Constitution of Maddrell's Salt  
( $\text{NaPO}_3$ )<sub>2</sub>, 19 pp. UNCLASSIFIED  
by Erich Thilo, Ilse Flaetschke

GERMAN, per, Z. Anorg. Chem., Vol CCLX, 1949,  
pp 297-314.

ABC Tr 1895

Scientific - Chemistry

15,143

The Higher Nickel Hydroxides, by O. Glemser,  
J. Einerhand.

GERMAN, no per, Zeit Anorg Chem, Vol CCLXI, 1950,  
pp 26-42.

R.A.E. Fernsborough 588

Sci - Chemistry  
Mar 57 CTS/dex

45,085

The Structure of Higher Nickel Hydroxides, by  
O. Glemser, J. Einerhand , 15 pp.

GERMAN, per, Z Anorg Chem, Vol ~~XXXXXX~~ CCLXI, 1950,  
pp 43-51.

SLA Tr 57-1845

Sci

Jun 58

65,882

The Sealing Conditions and Mechanism of Oxidation  
of Heat- and Scale-Resistant Hard Alloys, with  
Special Reference to Titanium-Carbide Base  
Material, by R. Kieffer, P. Kolo. UFCL

GERMAN, per, *Z Anorg Chem*, Vol ~~CCCLXII~~ CCLXII, Part  
I and V, 1950.

British Iron and Steel Ind  
(no number given)

Sci - Min/Inst  
Esp 59

98, 252

On the Dark Green Hydroxide Compounds of Iron,  
by W. Feitknecht, G. Keller.

Full tr

per,  
GERMAN, Zeit für Anorg Chem, Vol CCLXII, 1950,  
pp 61-68.

Navy Tr No 1442/NRL 595

Sci - Chemistry  
Jan 1957 CTB/dex

43,048

a

The Diffusion of Carbon in Sintered  
Steel Alloys, by W. Seith, 18 pp.  
GERMAN, par, Z. Anorg. Chem. 262, 1950  
pp. 129-146.  
\*NBS TT 70-57838

Sci/mat  
Jun 70

The Scaling Behavior and Oxidation Mechanism  
of Heat- and Scale-Resistant Hard Alloys, in  
Particular of those with a Titanium-Carbide  
Base, by R. Vieffer, W. Kolbl, 16 pp.

GERMAN, per, Z. Anorg Chem, Vol CCLXII, 1950,  
pp 229-247.

Assoc Tech Serv 61H120

Sci  
Aug 58

70,874  
OTS 60-14765

The Precipitation of Alumina Hydrate According to Bayer as a Problem of E Nucleus Formation, by E. Hermann, Stipetic, 42 pp.

GERMAN, per, Zeit fuer Anorganische Chemie, Vol CCLXII, 1950, pp 258-287.

S.L.A. Trans 943

Sci - ~~Physics~~ *Chemistry*  
~~Minerals/Metals~~

*29,900*

The Effect of Sulfur Dioxide on Ammonia, by  
M. Goehring and H. -W. Kalcoumenos.  
GERMAN, per, Zeitschrift fuer Anorganische und  
Allgemeine Chemie, Vol 263, 1950, pp 137-144.  
NTC 71-13721-07B

Feb 72

Anomalous Mixed Crystals in the System  $\text{ThO}_2\text{-La}_2\text{O}_3$ ,  
by F. Hund, W. Durrwachter.

GERMAN, per, Z Anorg Chem, 1951, Vol 265, pp 67-72.

\*AEC

Sci  
15 Jun 62

Contributions to the Chemistry of Elements, by  
Schaefer.

GERMAN, per, Z fuer Anorganische Chemie, Vol  
CCIXVI, Hamburg, 1951, pp 140-151.

Dept of Interior  
US Bur of Mines  
Div of Mineral Tech  
Region IV  
Rolla, Missouri

Sci - Chem

87,559

May 59

<p>Schaefer, H., Goeser, C., and Bayer, L. CHEMISTRY OF THE ELEMENTS NIOBIUM AND TANTALUM. IV. NIOBIUM TETRACHLORIDE AND ITS DECOMPOSITION INTO THE TRICHLORIDE AND THE PENTACHLORIDE. [1961] 25p. 17 refs. Order from ES \$11.00</p> <p>Trans. of <u>Zeitschrift für Anorganische Chem[ie]</u> (East Germany) 1951. v. 265, p. 2581-2588. <i>No 4/6 372</i></p> <p>DESCRIPTORS: *Niobium, *Tantalum, *Niobium com- pounds, *Chlorides, Decomposition.</p> <p>(Chemistry--Inorganic, TT. v. e, no. 7)</p>	<p>61-25132</p> <p>I. Schaefer, H. II. Goeser, C. III. Bayer, L. IV. Stux, Erica, Akron, Ohio V. Title: Niobium...</p> <p>181307</p> <p>Office of Technical Services</p>
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Contributions to the Chemistry of the Elements  
Niobium and Tantalum: Part VI. The Separation  
of the Elements Niobium and Tantalum by the  
Reduction of Niobium Pentachloride, by  
H. Schafer, C. Pietruck

GERMAN, per, Z Anorg Chem, Vol CCL<sup>XVI</sup>, 1951,  
pp 151-160.

TPA3/TIB T 4263

Scientific - Chemistry  
CTS/DEX

17,379



The Kinetics of Oxidation, by  
H. V. Wartenberg, 10 pp.  
GERMAN, per, Z. Anorg. Chem. 269,  
1952, pp. 76-85.  
\*NBS TT 70-57859

Sci/phys  
Jun 70

On the Theory of Surface Diffusion Occuring in  
Sintered Metals in hta Atmosphere, by M. Clasing.  
GERMAN, per, Zeit Anorg Chem, Vol 271, 1952,  
pp 88-92.

\*Nat Bur Stand TT 70-57803

Sci-Mat  
Jul 70

Concerning a New Process for the Production of  
Metal Borides of the Transition Metals in  
Particular Titanium and Zirconium Boride, by  
R. Kieffer, F. Benesovsky, E. R. Honak, 11 pp.

GERMAN, per Z Anorg u Chem, Vol CCLXVIII, No 3,  
1952, pp 191-200.

SLA 57-704

Sci - Minerals/Metals  
Oct 57

54,056

<p>Schaefer, H., Bayer, L., and Lehmann, H. CHEMISTRY OF THE ELEMENTS NIOBIUM AND TANTALUM. IX. EQUILIBRIUM PRESSURE OF NIO- BIUM TETRACHLORIDE DECOMPOSITION. [1961] 16p. 10 refs. Order from ES \$7.00</p>	<p>61-25133</p> <p>I. Schaefer, H. II. Bayer, L. III. Lehmann, H. IV. Title: Equilibrium... V. Stuz, Erica, Akron, Ohio</p>
<p>Trans. of Zeitschrift für Anorg[anische] Chem[ie], (East Germany) 1952, v. 268, p. 268-278.</p>	<p>176751</p>
<p>DESCRIPTORS: *Niobium, *Tantalum, *Niobium com- pounds, *Chlorides, Decomposition.</p>	<p>Office of Technical Services</p>
<p>(Chemistry--Inorganic, TT, v. 6, no. 6)</p>	

Preparation and Properties of the Compounds  
 $\text{Li}_3\text{AlAs}_2$  and  $\text{Li}_3\text{AlP}_2$ , by Robert Juza, Werner  
Schulz, 10 p.

GERMAN, per, Zeit fur Anorganische Chem, 1952,  
Vol CCLXIX, No 1/2, pp 1-12.

SLA 59-17958

Sci  
Mar 60  
Vol 2, No 11

109,526

Aluminum Triethanolamine  $Al(OC_2H_4)_3N$  and Its  
Behavior in Coordination, by Fr. Hein, P. W. Albert,  
8 p.

GERMAN, per, Zeit Anorg Chem, 1952, Vol CCLXIX,  
pp 67-75.

ATS-221320

Sci  
Mar 60  
Vol 2, No 11

109,547

THE CHEMISTRY OF NITROSYL IONS. VI: THE CONSTITU-  
TION AND REACTIONS OF DINITROGEN TETROXIDE, BY F.  
SEEL, J. NOGRADI.

GERMAN, PER, Z ANORG CHEM, VOL CCLXIX, 1952, PP  
102-116.

TIL T 5236

SCI - CHEM

SEP '62

210,231

About the Equilibrium Equation for the  
Reaction of and the Thermo-Chemical  
Properties of the Gaseous Silicon Dichlo-  
rides, by Harald Schafter, Julius Nickl,  
19 pp.

GERMAN, per, Z fuer Anorganische Chemie,  
Vol ~~ZXXXX~~ CCLXXIV, No 4/5, 1953,  
pp 250-264.

SLA 60-18007

Sci

Feb 62

Retardation and Acceleration of the Decomposition  
of Sodium Amalgam in the Industrial Electrolysis  
of Alkaline Chloride, by G. Morgenstern, 6 p.

GERMAN, partial trans, per, Zeitschrift für  
Anorganische Chemie, 1953, Vol CCLXXXII, No 14,  
pp 111-121.

SLA 59-17916

Sci  
Feb 60  
Vol 2, No 10

About the Equilibrium Equation for the  
Reaction of and the Thermo-Chemical  
Properties of the Gaseous Silicon Dichlo-  
rides, by Harald Schafter, Julius Nickl,  
19 1953.

GERMAN, per, Z fuer Anorganische Chemie,  
Vol ~~XXIXXNS~~ CCLXXIV, No 4/5, 1953,  
pp 250-264.

SLA 60-18007

Sci

*186, 686*

Feb 62

Krebs, Heinz and Weber, B. F.  
THE STRUCTURE AND PROPERTIES OF THE SEMI-METALS. VI. THE ALLOTROPY OF SULFUR.  
[1961] 15p. 33 refs.  
Order from SLA \$1.60                      62-10225

Trans. of Zeit[schrift für] Anorg[anische] Chemie  
(East Germany) 1953, v. 272 [no. 5/6] p. 288-296.

DESCRIPTORS: Metals, \*Sulfur, Phase studies,  
Molecular structure, Physical properties, Catalysts,  
Catalysis, Ions, Amines.

In analogy with the high and low molecular seleniums, the ring structure of the molecules of the corresponding forms of sulfur is discussed, and given an experimental basis. The splitting open of rings is facilitated by the presence of sulfur ions, and basic amines, and thus they are capable of catalyzing the conversions between the high and low molecular phases. Likewise, they activate sulfur in chemical reactions. (Author)

62-10225

I. Title: Semi-metals  
I. Krebs, H.  
II. Weber, B. F.  
III. Title: Allotropy...

(Chemistry--Inorganic, TT,  
v. 7, no. 10)  
Office of Technical Services

Reactions of Gold-liquid Amalgams with Gases. I.  
Reactions of Alkali and Alkaline Earth Amalgams with  
Carbon Dioxide, by Hans Hohn, Erich Fitzer, Hubert  
Nedwed, 39 pp.

Full translation.

GERMAN, per, Z. anorg. Chem., Vol CCLXXIV, Dec 1953,  
pp. 299-315.

297-

S.I.A.

Scientific - Chemistry

26,016  
Jul 55

Silicon Chalcogenides, VI. The Fibrous  $\text{SiO}_2$   
Modification by Alarich Weiss, Armin Weiss,  
15 p.

GERMAN, per, Zeit für Anorganische Chemie,  
1954, Vol CCLXXVI, No 1/2, pp 95-112.

SLA 60-10188

Sci  
Apr 60  
Vol III, No 3

112,125

Diffusion in the High Temperature Mod-  
ification of  $\text{Ag}_2\text{S}$  and  $\text{Cu}_2\text{S}$ , by W. Seith  
GERMAN, per, Z. Anorg. Chem. 276, 1954,  
pp. 141-145.

\*NBS TT 70-57296

Sci/mater

Jul 70

Pyridine Complexes of Copper ~~IX~~ (II)-Polythionates  
and Their Analytical Application, by Gerhard Heinze,  
8 pp.

GERMAN, per, Zeit fur Anorganische Chemie,  
Vol CCLXXVI, 1954, pp 146-154.

CIA/FDD/z-165

28,613

Scientific - Chemistry

Nov 55 CTB/DEX

61-10163

Thilo, Erich and Wicker, Wolfgang.  
ON THE CHEMICAL PROOF OF STRUCTURE OF THE HEXAGONAL EASILY VOLATILE MODIFICATION OF PHOSPHORUS(V)-OXIDE. III. THE HYDROLYSIS OF PHOSPHORUS(V)-OXIDE. [1960] 12p. (figs. formulae omitted) 18 refs.  
Order from SLA ml\$2.40, ph\$3.30

I. Phosphorus oxides--  
Hydrolysis  
1. Thilo, E.  
II. Wicker, W.  
III. Title: Hydrolysis...

143, 213

Trans. of Zeitschrift für Anorganische Chemie (East Germany) 1954, v. 277, p. 27-36.

The small quantities of trimetaphosphate ( $P_3O_{10}^{4-}$ ) which form in the hydrolysis of  $P_4O_{10}$  do not form through isomeric tetrametaphosphoric acid as the presumed first detectable product of the hydrolysis, but from high molecular condensed phosphates which form in small quantities from  $P_4O_{10}$  in contact with water. It is shown why the hydrolysis of the  $P_4O_{10}$  proceeds not like the hydrolysis of tetrametaphosphoric acid, but the same as the hydrolysis of tetrametaphosphoric acid. The hydrolysis of  $P_4O_{10}$  is investigated in detail and a detailed mechanism is suggested for the hydrolysis. (Author)

Office of Technical Services

The Alkali-Graphite Compounds, by W. Rudorff,  
B. Schulze, 12 pp.

GERMAN, PER, Z fur Anorg Chemie, 1954, Vol. CCLXXVII,  
pp 156-171.

SLA 59-15293

Sci  
Oct 59  
Vol 2, No 3

99,881

63-10116

Straumanis, M. E. and Ballas, J. I.  
REACTION OF METALLIC TITANIUM, ZIRCONIUM,  
HAFNIUM, AND THORIUM WITH ACIDS, PARTICULARLY  
HYDROFLUORIC ACID. 1 Nov 61, 14p.

11 refs.

Order from SLA \$1.60

63-10116

Trans. of Zeitschrift für Anorganische Chemie  
(East Germany) 1955, v. 278, p. 33-41.

Another trans. is available from SLA as AEC-tr-2820,  
6p.

DESCRIPTORS: \*Titanium, \*Zirconium, \*Hafnium,  
\*Thorium, Resistance, Acids, \*Hydrogen compounds,  
\*Fluorides, Surfaces, Oxides, Corrosion, Chemical  
reactions.

(Chemistry- Inorganic, TT, v. 9, no. 10)

I. Straumanis, M. F.  
II. Ballas, J. I.

Office of Technical Services

The Electrochemical Fluorination of Inorganic  
Compounds; Anodic Formation of Sulphuryl Fluoride,  
by H. Schmidt, E. D. Schmidt, 14 pp.

GERMAN, per, Z. Anorg Chem, Vol CCLXXIX, 1955,  
pp 289-299.

S.L.A. Tr 783/1956

Sci - Chemistry  
Oct 56 CTS

39,830

SLA 61-10528

62-16641

Fritz, G.  
FORMATION, PROPERTIES AND REACTIONS OF  
THE SILYLPHOSPHINE. [1962] 1p.  
Order from SLA \$1.10                      62-16641

I. Fritz, G.

Abstract trans. of *Zeitschrift für Anorganische  
Chemie* (East Germany) 1955, v. 280, no. 5/6,  
p. 332-345.

DESCRIPTORS: \*Silicon compounds, \*Phosphines,  
Synthesis, Chemical properties, Chemical reactions

(Chemistry--Organic, TT, v. 8, no. 7)

Office of Technical Services

Investigations of Surface Areas by the Method  
of Brunauer, Emmett and Teller. The B-Point  
Pressures of a Single Molecule Absorbed  
Layer as Characteristic Constants, by P.  
Royen, A. Orth and K. Ruths, 14 pp.

GERMAN, per, Z. Anorg Chem, Vol CCLXXXI, Oct  
1955, pp 1, 2; 1-17.

SLA 7-3497

Sci

73,343

Aug 58

Royen, P. and Reinhardt, H.  
INFLUENCING THE OXIDATION EQUILIBRIUM OF  
IRON BY ADDITION OF GOLD, SILVER, COPPER  
OR NICKEL. [1962] 1p.  
Order from SLA \$1.10

62-16642

Abstract trans. of Z[eit-schrift für] Anorg[anische]  
Chem[ie] (East Germany) 1955, v. 281, no. 1/2,  
p. 18-36.

DESCRIPTORS: \*Iron, Chemical equilibrium,  
OXIDATION, \*Gold, \*Silver, \*Copper, \*Nickel,  
Additives.

(Chemistry--Inorganic, TT, v. 8, no. 6)

62-16642

I. Royen, P.  
II. Reinhardt, H.

Office of Technical Services

A Contribution to the Study of Silver (II) Oxide,  
by G. M. Schwab, G. Hartmann.

GERMAN, no per, Z Anorg Chem, Vol CCLXXXI, 1955,  
ppm183-186.

DSIR/30146/CT

Sci - Chemistry  
Oct 57

53,894

Lithium and Magnesium Methylens, by K. Ziegler,  
K. Nagel, M. Patheiger, 3 p.

GERMAN, per, Z Anorg Chemie, 1955, Vol CCLXXXII,  
No 1-6, pp 345-351.

SLA 59-15940

Sci  
Dec 59  
Vol 2, No 6

104,114

Phases in the Cu-Sb System, by A. Boettcher.  
GERMAN, per, Zeit Anorg Chem, Vol 283, 1956,  
pp 26-48.  
\*Nat Bur Stand TT 70-57800

Sci-Chem  
Jul 70

Ehrlich, P., Alt, B., and Gentsch, L.  
THE CHLOROHYDRIDES OF THE ALKALINE EARTH  
METALS. [1962] 29p.  
Order from K-H \$36.25 K-H 4050 c

Trans. of Zeitschrift f[ür] Anorg[anische] Chemie  
(East Germany) 1956, v. 283, p. 58-73.

DESCRIPTORS: \*Chlorine compounds, \*Hydrides,  
\*Alkaline earth metals.

63-12932

- I. Ehrlich, P.
- II. Alt, B.
- III. Gentsch, L.
- IV. K-H-4050-c
- V. Kresge-Hooker Science  
Library Associates,  
Detroit, Mich.

(Chemistry--Inorganic, TT, v. 9, no. 10)

Office of Technical Services

Wannagat, U. and Hohlstein, G.  
REACTIONS OF DNITROSYL PYROSULFATE. [1962]  
14p.  
Order from ATS \$20. 50                      ATS-25P64G

Trans. of Z[eitschrift für] Anorg[anische] Chem[ie]  
(East Germany) 1956, v. 284, no. 4/6, p. 177-190.

DESCRIPTORS: \*Nitrogen compounds, \*Sulfates,  
Chemical reactions.

63-12034

- I. Wannagat, U.
- II. Hohlstein, G.
- III. ATS-25P64G
- IV. Associated Technical  
Services, Inc., East  
Orange, N. J.

(Chemistry--Physical, TT, v. 9, no. 2)

Office of Technical Services

Blue Solutions of Sodium in Methylamine, by  
G. Kohlstein, U. Mannagat.

GERMAN, PAT, Z Anorg Chem, 1956, Vol 284, pp 191-196.

\*ARC

Apr 62

62-10443

Goehring, Margot and Voigt, Dietrich.  
DISULFUR DINITRIDE AND A SULFUR NITRIDE OF  
THE SERIES  $(SN)_x$  (Über Dischwefel-Dinitrid,  $S_2N_2$   
und Polyschwefelstickstoff,  $(SN)_x$ ). [1961] [24]p.  
(foreign text included) 21 refs.  
Available on loan from SLA 62-10443

I. Goehring, M.  
II. Voigt, D.

Trans. of *Zeitschrift für Anorganische Chemie* (East  
Germany) 1956, v. 285 [no. 3/6] p. 181-190  
Other translations are available from ATS \$12.60 as  
ATS-44L36G [1960] 9p. and from SLA mi\$1.80,  
ph\$1.80 as 60-16909, Dec 56, 7p.

DESCRIPTORS: \*Sulfur compounds, \*Nitrides, De-  
composition, Polymerization, Dissociation, Chemical  
analysis

For abstract see Technical Translations 4: 447, 1960.

(Chemistry--Inorganic, TT, v. 7, no. 4)

Office of Technical Services

Schäfer, Harald, Jacob, Herbert, and Etzel, Karl.  
CHEMICAL TRANSPORT REACTIONS. I. ON THE  
TRANSPORT OF PRECIPITATES IN TEMPERATURE  
GRADIENTS BY MEANS OF HETEROGENEOUS  
EQUILIBRIUMS. [1961] 26p. 22 refs.  
Order from SLA \$2.60

61-18252

Trans. of Zeitschrift für Anorganische Chemie  
(East Germany) 1956, v. 286 (no. 1) p. 27-41.

DESCRIPTORS: \*Chemical equilibrium, Convection,  
Thermal diffusion, \*Electrostatic precipitation, Gases,  
Diffusion, Chemical reactions, Thermochemistry,  
Decomposition, \*Transport properties.

If reversible reactions such as  $Si + SiCl_4(\text{gaseous}) = 2 SiCl_2(\text{gaseous})$  and  $Fe_2O_3 + 6 HCl = 2 FeCl_3(\text{gaseous}) + 3 H_2O$  take place in reaction tubes which lie in a temperature gradient (for example, 1000/800° C), the precipitate is taken up at the higher temperature and is  
(Chemistry--Inorganic, TT, v. 6, no. 10) (over)

61-18252

- I. Title: Transport reactions
- I. Schäfer, H.
- II. Jacob, H.
- III. Etzel, K.
- IV. Title: On the Transport...

ACQUISITION  
(9207959)

187242

Office of Technical Services

61-22640

Schafer, H., Jacob, H., and Etzel, K.  
CHEMICAL TRANSPORT REACTIONS. II. THE AP-  
PLICATION OF THE DECOMPOSITION EQUILIBRIUM  
OF IRON (II) AND NICKEL (II) HALIDES TO THE  
TRANSPORT OF THE METAL IN A TEMPERATURE  
GRADIENT. [1961] 12p.  
Order from ATS \$14.75                      ATS-63NS1G

- I. Title: Transport reactions
- I. Schafer, H.
- II. Jacob, H.
- III. Etzel, K.
- IV. ATS-63NS1G
- V. Associated Technical  
Services, Inc., East  
Orange, N. J.

Trans. of Zeitschrift für Anorganische Chemie (East Germany) 1966, v. 25f, p. 42-55.

DESCRIPTORS: Iron compounds, Nickel compounds,  
\*Halides, Decomposition, Iron, Nickel, Metals,  
Thermodynamics, \*Chemical equilibrium, Chemical  
reactions

175342

<p>Kroeger, Carl and Janetzko, Wilhelm. A CONTRIBUTION TO THE THERMOCHEMISTRY OF NITRATE GLASSES. [1961][12]p. 4 refs. Order from SLA mi\$2.40, pi\$3.30      61-10948</p> <p><u>Trans. of Zeitschrift für Anorganische Chemie</u> (East Germany) 1956, v. 287, p. 28-32.</p>	<p>61-10948</p> <ol style="list-style-type: none"><li>1. Glass--Thermochemistry</li><li>2. Glass--Phase studies</li><li>3. Title: Nitrate glass</li></ol> <ol style="list-style-type: none"><li>I. Kroeger, C.</li><li>II. Janetzko, W.</li></ol> <p style="text-align: center; font-size: 24pt;">148741</p> <p style="text-align: center; font-size: 10pt;">Office of Technical Services</p>
<p>(Materials--Ceramics, TT, v. 5, no. 12)</p>	

Catalytic Decomposition of Peroxydisulfuric  
Acid. Part I, by Helene Galiba, L. J. Csanyi,  
Z. G. Szabo, 23 pp.

GERMAN, per, Z für Anorganische Chemie,  
Vol CCLXXXVII, 1956, pp 152-168.

HKR RDS Rept. 97036

Sci  
Feb 62  
Vol III, No 11

184, 878

Nitrides of the Rare Earth Metals, by W. Klemm,  
G. Winkelmann, 5 pp.

GERMAN, per, Z Anorg Chem, Vol CCLXXXVIII, 1956,  
pp 87-90. 9079459

AEC Tr-4654

169, 917

Sci  
Aug 61

The High Nickel Hydroxides: The Oxidation of  
Nickel 2 Hydroxide, by W. Feitknecht, H. R.  
Christen, E. Studer.

GERMAN, per, Z. Anorg Chem, No CCLXXXIII, 1956,  
pp 88-95.

R.A.E. Farnborough Tr 610

Sci - Chem, Min/met  
May 57 CTS/dex

437,555

Catalytic Decomposition of Peroxydisulfuric  
Acid. Part I, by Helene Galiba, L. J. Csenyi,  
Z. G. Szabo, 23 pp.

GERMAN, Monatsh. für Anorganische Chemie,  
Vol CCLXXXVII, 1956, pp 152-168.

MLA RB Rept. 97036

Sci  
Feb 62  
Vol III, No 11

A Mica-Like Modification of Silicon Oxide  
[ $\text{HSiO}_2$ ]<sub>x</sub>, by Egon Von Wiberg, Walter Simmler, 20 pp

GERMAN, per, Z. fuer Anorg Chem, Vol CCLXXXIII, No 1/6  
1956, pp 401-413.

SLA 59-10823

Sci - Chem

Sep 59

Vol 2, No 1

97,256

Schmidt, Max.

ACIDS OF SULFUR. III. ANHYDROUS POLYTHIONIC ACIDS (SULFANE DISULFONIC ACIDS)  $H_2S_3O_6$ ,  $H_2S_4O_6$ ,  $H_2S_5O_6$ ,  $H_2S_6O_6$ , AND  $H_2S_7O_6$ : PREPARATION OF SOLUTIONS AND SALTS OF OCTATHIONIC ACID, DECATHIONIC ACID AND DODECATHIONIC ACID. [1962] 29p. 3 refs.

Order from SLA \$2.60

62-14449

Trans. of Zeitschrift für Anorganische Chemie (East Germany) 1957, v. 289 [no. 1/4] p. 175-192.

DESCRIPTORS: \*Sulfur, Acids, \*Sulfonic acids, \*Thiols, Preparation, Sulfites, Iodine.

The discovery of the sulfane monosulfonic acids,  $H_2S_xO_3$ , disclosed two new methods which may be applied to the polythionic acids: (1) the sulfane monosulfonic acids react directly with  $SO_3$  forming the anhydrous polythionic acids:  $H_2S_{x-1}O_3 \cdot SO_3 \rightarrow H_2S_xO_6$ ; (Chemistry--Inorganic, TT, v. 8, no. 9) (over)

62-14449

- I. Schmidt, M.
- II. Title: Anhydrous ...
- III. Title: Preparation ...

Office of Technical Services

61-10563

Gutmann, V. and Matzinger, F.  
THE SOLVO SYSTEM PHOSPHORUS OXYCHLORIDE  
III. POTENTIOMETRIC TITRATIONS AND BE-  
HAVIOR OF CERTAIN INDICATORS. [1960] [10]p.  
11 refs.

Trans. of the Chem. Soc. (Anorganische Chemie  
(East Germany) 1959, v. 289, no. 5/6, p. 279-287.

The Hg electrode responds to chloride ion activity in  
phosphorus oxychloride and hence acts as a Cl<sup>-</sup> elec-  
trode. In several reactions are followed poten-  
tiometrically on the basis of the results of poten-  
tiometric studies the relative basicity of a number of  
metal ions relative to SbCl<sub>5</sub> in phosphorus oxychlo-  
ride solvent is established. It increases in the follow-  
ing order: SnCl<sub>4</sub> < FeCl<sub>3</sub> < ZrCl<sub>4</sub> < SbCl<sub>5</sub> <  
PbCl<sub>2</sub> < SnCl<sub>4</sub> < TaCl<sub>5</sub> < NbCl<sub>5</sub> < AlCl<sub>3</sub>(7) <  
PCl<sub>5</sub> < TiCl<sub>4</sub> < (CH<sub>3</sub>)<sub>4</sub>NCl < pyridine < (C<sub>2</sub>H<sub>5</sub>)<sub>4</sub>NCl.  
A number of dye indicators give color changes in phos-  
(Chemistry--Physical, TT, v. 5, no. 7) (over)

- 1. Phosphorus oxychlorides--  
Electrochemistry
- 2. Title: Potentiometric  
titration.
- I. Gutmann, V.
- II. Matzinger, F.
- III. Title: Potentiometric...

148,538

K-17 6007 b

Office of Technical Services

About the Transport of Silicon in a  
Temperature Gradient Under the In-  
fluence of Silicon Di-Halogenide and  
About the Transport Direction as a  
Function of Pressure, by ~~HAAR~~ Harald  
Schaffner, Bernhard Morcher, 18 pp.

GERMAN, per, Z fuer Anorganische Chemie,  
Vol CCXC, No 5/6, 1957, pp 279-291.

SLA 60-180084

Sci

Feb 62

Note on the Preparation of Silicon Monobromide, by  
A. Pfugmacher, I. Rohrman.

GERMAN, per, Z Anorg Chem, Vol CCXC, 1957, pp 101,  
102.

DSIR/30905/CT

Sci - Chemistry  
Mar 58

59,984

62-14028

I. Pflugmacher, A.  
II. Dahmen, H.  
III. Title: Tris-Trichlorosilyla-  
mine...

Office of Technical Services

Pflugmacher, A. and Dahmen, H.  
ON THE FORMATION OF SILICON-NITROGEN  
COMPOUNDS IN THE GLOW DISCHARGE: TRIS-  
TRICHLOROSILYLAMINE (SiCl<sub>3</sub>)<sub>3</sub>N. [1962] 6p.  
(4 figs. omitted) 7 refs.  
Order from SLA \$1.10

62-14028

Trans. of Zeitschrift für Anorganische Chemie (East  
Germany) 1957, v. 290, p. 184-190.

DESCRIPTORS: \*Glow discharges, \*Silicon com-  
pounds, \*Nitrogen compounds, Production

By the reaction of SiCl<sub>4</sub> and N<sub>2</sub> in the glow discharge  
(SiCl<sub>3</sub>)<sub>3</sub>N is formed as a crystalline substance in the  
presence of a series of oily and resinous products.  
It occurs in two polymorphic modifications of which  
the stable has a f. p. of 98° and the unstable of 44°C.  
Through condensation by elimination of SiCl<sub>4</sub> from  
(SiCl<sub>3</sub>)<sub>3</sub>N two series of compounds result, one of  
which possesses a cyclic structure and crystalline  
(Chemistry--Inorganic, TT, v. 8, no. 7) (over)

About the Transport of Silicon in a  
Temperature Gradient Under the In-  
fluence of Silicon Di-Halogenide and  
About the Transport Direction as a  
Function of Pressure, by ~~HEK~~ Harald  
Schaffner, Bernhard Morcher, 18 pp.

GERMAN, per, Z fuer Anorganische Chemie,  
Vol CCXC, No 5/6, 1957, pp 279-291.

SLA 60-1800g4

Sci

186, 687

Feb 62

Sulfur Chemistry XXXVII, by F. Feher, K.  
H-used, He. Weber, 23 pp.

GERMAN, per, Z fuer Anorgan Chemie,  
Vol CCXC, 1957, pp 303-319.

SLA 60-16878

Sci  
Vol IV, No 7  
Apr 62

192, 616

61-18662

Schäfer, Harald and Morcher, Bernhard.  
CHEMICAL TRANSPORT REACTIONS. IV. MIGRA-  
TION OF SILICON DIOXIDE IN A TEMPERATURE  
GRADIENT IN ASSOCIATION WITH SILICON MON-  
OXIDE AND SILICON HALIDES (Die Wanderung von  
Siliciumdioxid im Temperaturegefälle unter Mitwirkung  
von Siliciummonoxyd und Siliciumhalogeniden). [1961]  
10p. 17 refs.  
Order from SLA \$1.10 61-18662

- I. Title: Transport reactions
- I. Schäfer, H.
- II. Morcher, B.
- III. Title: Migration...

Trans. of Z[eitschrift für] Anorg[anische] Chemie  
(East Germany) 1957, v. 291, p. 221-226.

1272

DESCRIPTORS: \*Silicon compounds, \*Dioxides,  
\*Monoxides, \*Halides, Chemical reactions, Separation,  
Condensation reactions, Decomposition,  
Thermodynamics.

When a mixture of Si and SiO<sub>2</sub> is heated, after addition  
(Chemistry--Inorganic, TT, v. 6, no. 10) (over)

Office of Technical Services

Chemical Studies of Silicates, XIX. Products of  
The Action of Water on  $\beta$ - $\text{Ca}_2\text{SiO}_4$ , up to 120°C.  
by Herbert Funk, 18 p.

GERMAN, per, Z Anorg Chem, 1957, Vol CCXCI,  
No 5/6, pp 276-293.

SLA 59-17210

Sci  
Dec 59  
Vol 2, No 6

104,133

61-22905

Schafer, H. and Etzel, K.  
THE MIGRATION OF COPPER (I) OXIDE AND OF  
COPPER IN TEMPERATURE GRADIENTS. Pt. 5. of  
Chemical Transport Reactions. [1961] 10p.  
Order from ATS \$14.10                      ATS-64N51G

Trans. of Zeitschrift für Anorganische Chemie  
(East Germany) 1957, v. 291, p. 294-304.

DESCRIPTORS: Copper compounds, \*Oxides,  
Temperature, \*Copper, Chemical reactions, \*Trans-  
port properties, Liquid metals.

- I. Schafer, H.
- II. Etzel, K.
- III. Title: Chemical ...
- IV. ATS-64N51G
- V. Associated Technical  
Services, Inc., East  
Orange, N. J.

177743

Office of Technical Services

(Chemistry--Physical, TT, v. 6, no. 4)

The Influence of Raw Material in Crystalline  
Forms Produced During Thermal Decomposition and Transformation, Respectively, of Aluminum  
Hydroxides. II. Influence of the Raw Material  
on the Course of Decomposition of Hydroxides, by  
Hans Ginsberg, Werner Harttig, Gusti Lichtenberg,  
15 pp.

GERMAN, ber. Z. Anorg. Chem., Vol CXXCII, No 3/4,  
1957, pp 204-213

SLA 59-15075

Sci - Chem  
Sep 59  
Vol 2, No 2

97,975

The Influence of Raw Material on Crystalline Shapes Formed During Thermal Decomposition and Transformation, Respectively, of Aluminum Hydroxides. I. The Crystalline Forms of Thermal Decomposition of Aluminum Hydroxides, by Zans Ginzberg, Werner Huettig, Guatl Strunk-Lichtenberg, 25 pp.

GERMAN, per, Z fuer Anorg Chemie, Vol CCXCIII, No 1/2, 1957, pp 33-46.

SLA 59-15076

Nov 59

Sci

Vol 2, No 3

101,717

Electrolysis of Cyanides. II. Electrolyses of Cyanides  
in Anhydrous, Liquid Ammonia, by H. Schmidt, H. Meinert,  
15 pp.

BERMAN, per, Z fur Anorg Chem, Vol CCXCV, No 3/4,  
1958, pp 156-172.

Asso Tech Serv  
61K28G

Sci - Phys  
OTS I, 9  
Jun 59

89,533

Electrolysis of Cyanides. III. Electrolysis of  
Cyanides in Anhydrous Pyridine, by H. Schmidt, H.  
Meinert, ~~25pp.~~ 11 pp.

GERMAN, per, Z fur Anorg Chem, Vol CCXCV, No 3/4,  
1958, pp 173-184.

Asso Tech Serv  
62K28G

Sci - Phys  
OTS I, 9  
Jun 59

89,532

The Molecular State in Aqueous Solutions of  
Arsenious Acid, by G. Jander, H. Hofmann. URCL

GERMAN, per. Z. Anorg. Chem., Vol CCXCVI, 1958,  
pp 134-153.

DSIR/36599/CT

Sci - Chem  
Nov 59

99,795

Products of the Action of Water on Different Forms  
of  $\text{Ca}_2\text{SiO}_4$  at  $120^\circ$  to  $350^\circ\text{C}$  and Conditions of Their  
Formation, by Herbert Funk, 13 p.

GERMAN, per, Zeit Anorg Chem, 1958, Vol CCKCVII,  
pp 103-120.

SLA 60-10702

Sci

May 60

Vol 3, No 4

116, 764

ENTHALPY OF FORMATION OF ALUMINUM PHOSPHATE, BY  
ROBERT JUZA, GISELA WAINOFF, ET AL, 8 PP.

GERMAN, PER, Z. FUER ANORGANISCHE CHEMIE, VOL CCXCVI,  
1958, PP 157-163.

XX OTS 60-19160

~~XX~~

SCI - CHEM  
11 OCT 62  
VOL VIII, NO 1

212,314

Becke-Goehring, Margot and Sambeth, Jörg.  
ON PHOSPHORUS-NITROGEN COMPOUNDS. VIII.  
ON THE REACTION BETWEEN PHOSPHORUS(V)-  
OXIDE AND AMMONIA. [1960] 9p. (6 formulae  
omitted) 18 refs.  
Order from SLA ml\$1.80, ph\$1.80 61-10227

Trans. of [Zeitschrift für Anorganische Chemie  
(East Germany) 1958, v. 297, p. 287-295.

151785

(Chemistry--Physical, TT, v. 5, no. 9)

61-10227

- 2-1959
1. Phosphorus compounds--  
Chemical reactions
  2. Nitrogen compounds--  
Chemical reactions
  3. Ammonia--Chemical  
reactions

- I. Becke-Goehring, M.
- II. Sambeth, J.
- III. Title: On the Reaction...

Office of Technical Services

A Universal Thermobalance of High Accuracy,  
by H. Peters, H. G. Wiedemann.

GERMAN, per, Z ~~ANAL~~ Anorg Chem, ~~XX~~  
Vol CCXCVIII, 1959, pp 202-211.

Broken Hill Prop Co Ltd  
(CRL/T.507)

Sci - Engr  
Apr 62

191,419

Schwertmann, U.  
THE SYNTHESIS OF DEFINITE IRON OXIDES  
UNDER VARIOUS CONDITIONS. [1962] 12p. (figs.  
omitted) 25 refs.  
Order from SLA \$1.60 62-16447

Trans. of Z[eitschrift für] Anorg[anische] Chemie  
(East Germany) 1959, v. 298, p. 338-348.

DESCRIPTORS: \*Ores, \*Iron compounds, Oxides,  
Synthesis, Oxidation, Aging, Gels, \*Crystal struc-  
ture, X-ray diffraction analysis.

(Earth Sciences--Mineralogy, TT, v. 8, no. 10)

62-16447

1. Schwertmann, U.

Office of Technical Services

Börnert, Heinz and Weber, Ulrich von.  
THE PERMEATION OF HYDROGEN GAS THROUGH  
QUARTZ GLASS COATED WITH PALLADIUM (Notiz  
über die Permeation des Wasserstoffs durch Palladi-  
umbedecktes Quarzglas). [1962] [7]p. (foreign text  
included) 3 refs.

Order from SLA \$1.60

62-16416

Trans. of Zeitschrift für Anorganische Chemie  
(East Germany) 1959, v. 300, p. 81-83.

DESCRIPTORS: \*Glass, Coatings, \*Palladium,  
Hydrogen, Gases, Permeability, Quartz, \*Metal  
films, \*Diffusion.

The permeation of hydrogen through quartz glass  
coated by a film of palladium is in the temperature  
range from 400 to 700° C, 1.44 times greater than  
that through pure quartz glass. Above 700° C, this  
effect disappears because of recrystallization of Pd.  
(Author)

(Chemistry - Physical, FI, v. 8, no. 9)

62-16416

I. Börnert, H.  
II. Weber, U. von

Office of Technical Services

Siebert, Hans.

PEROXYANTIMONATES. 5 Jan 61, 10p. 11 refs.  
Order from SLA \$1.10                      63-10547

Trans. of [Zeitschrift für Anorganische Chemie] (East Germany) 1959, v. 301, p. 316-322.

DESCRIPTORS: \*Potassium compounds, \*Sodium compounds, \*Antimonates, \*Peroxides, Synthesis, Chemical properties, Spectra (Infrared), Chemical analysis

Peroxyantimonates are produced by treating solutions of potassium antimonates with  $H_2O_2$ . They are amorphous, difficultly soluble, polymeric substances. Among other things were isolated compounds of the approximate composition  $KSbO_4 \cdot 1.7 H_2O$ ,  $NaSbO_4 \cdot 2 H_2O$ ,  $KSbO_4 \cdot 1.8 H_2O_2$ , and  $K_2HSb_3O_{12} \cdot 3.5 H_2O$ . The composition of the peroxyantimonates is discussed with the aid of their infrared spectra. (Author)  
(Chemistry--Inorganic, TT, v. 10, no. 3)

63-10547

I. Siebert, H.

Office of Technical Services

9

Boehm, H. P. and Schneider, M.  
THE SURFACE HYDROXYL GROUPS OF AMOR-  
PHOUS SILICA (AEROSIL) AND THEIR REACTIONS.  
[1961] 10p. 32 refs.  
Order from SLA \$1.10 61-14935

Trans. of Z[eitschrift für] Anorg[anische] Chem[ie]  
(East Germany) 1959, v. 301, no. 5/6, p. 326-335.

DESCRIPTORS: \*Silicon compounds, Dioxides,  
\*Hydroxides, Chemical reactions, Surfaces.

Reactions of surface hydroxyl groups have been in-  
vestigated with finely divided amorphous silica  
(Aerosil). The hydroxyl groups react with calcium hy-  
droxide; esters are formed by reaction with alcohols  
and diazomethane. Heating with thionyl chloride leads  
to substitution by chlorine. This reaction is especially  
suited for the quantitative determination of hydroxyl  
groups bound to silica surfaces. (Author)

(Chemistry--Physical, TT, v. 6, no. 3)

61-14935

I. Boehm, H. P.  
II. Schneider, M.

175217

Office of Technical Services

61-22321

Nicolau, C. S. and Thom, H. G.  
INVESTIGATIONS OF ELECTRON SPIN RESONANCES  
AND ELECTRICAL RESISTANCE OF PLATINUM-  
CARBON CATALYSTS. [1961] 8p.  
Order from ATS \$7.85      ATS-54N48G

Trans. of *Zeitschrift für Anorganische Chemie*  
(East Germany) 1960, v. 303, p. 133-140.

DESCRIPTORS: \*Catalysts, \*Platinum catalysts,  
Carbon, Electrical properties, Resistance, Electrons,  
Spin, Resonance.

(Chemistry--Physical, TT, v. 6, no. 1)

I. Nicolau, C. S.  
II. Thom, H. G.  
III. ATS-54N48G  
IV. Associated Technical  
Services, Inc.,  
East Orange, N. J.

161826

Office of Technical Services

Primary Intermediate Products in the  
Hydration of Beta-Dicalcium Silicate and  
the Mechanism of Formation of Lime-Rich  
Tobermorite-Like Calcium Silicate Hydrate.  
by H. Funk.

GERMAN, per Z. anorg. Chem., Vol. 304, No.  
1/2, 1960, pp 12-24  
GB 334/CT.18 - 80e0d

Sci -

Aug 67

337-555

Schafer, Harold and Kahlenberg, Franz.  
CONTRIBUTION TO THE CHEMISTRY OF THE ELEMENTS NIOBIUM AND TANTALUM. XXII. THE ENTHALPY OF FORMATION OF TANTALUM CHLORIDE AND THE THERMOCHEMISTRY OF THE CHLORIDES  $TaCl_5$ ,  $TaCl_4$ , and  $TaCl_3$ . [1962] 18p. 34 refs.  
Order from SLA \$1.60 63-10767

Trans. of Zeitschrift für Anorganische Chemie (East Germany) 1960, v. 305, p. 178-189.

DESCRIPTORS: Niobium, \*Tantalum, \*Tantalum compounds, \*Chlorides, Thermochemistry, \*Enthalpy, Heat of formation.

The enthalpy of formation of tantalum tetrachloride was estimated by determination of the heat of solution:  
 $\Delta H(TaCl_4, 298) = -168.8 \pm 0.5$  kcal/mole. The enthalpy of formation of  $TaCl_5$  (s),  $TaCl_5$  (g),  $TaCl_4$  (s), (Chemistry--Inorganic, TT, v. 10, no. 1) (over)

63-10767

I. Schafer, H.  
II. Kahlenberg, F.  
III. Title: Enthalpy ...

Office of Technical Services

Studies on the Chemistry of Niobium and Tantalum.  
Part 23. Mermochemistry of Niobium Chloride, Part 24.  
Enthalpy of Formation, Saturation Pressure, and  
Thermochemical Behaviour of Niobium Cychloride  
~~NbOCl~~ NbOCl<sub>3</sub>, by H. Schafer, F. Kahlenberg.

GERMAN, per, Z fuer Anorg Chem, Vol CCCV, No 5-6,  
Aug 1960, pp 291-340.

\*U.K. <sup>R</sup>Atomic Energy Authority  
Risley, TRG Inf Series 51(S)

Sci - Chem  
Nov 61

61-18633

Wieker, Wolfgang and Thilo, Erich.  
THE CHEMISTRY OF THE CONDENSED PHOSPHATES  
AND ARSENATES. XXVIII. THE ANION DEGRADA-  
TION OF CONDENSED PHOSPHATES. II. CATALYTIC  
EFFECT OF METAL IONS UPON THE DEGRADA-  
TION OF POLYPHOSPHATES IN AQUEOUS SOLUTION.

[1961] 20p. (12 refs. omitted).  
Order from SLA \$1.60

61-18633

Trans. of Zeitschrift für Anorganische Chemie (East  
Germany) 1960, v. 306, no. 1/2, p. 48-62.

DESCRIPTORS: \*Phosphates, Titration, Solutions,  
\*Condensation reactions, Hydrolysis, Catalysts,  
Alkaline earths, Aluminum compounds, Chlorides,  
\*Arsenates, Ions.

By titrimetric persecution of the degradation of poly-  
phosphates in aqueous solutions it has been proved that  
this reaction is catalytically accelerated, the type of  
(Chemistry--Inorganic, TT, v. 6, no. 10) (over)

- I. Wieker, W.
- II. Thilo, E.
- III. Title: Anion...
- IV. Title: Catalytic...

1268

Office of Technical Services

Diffusion in the Sn-Pb Alloy System, by  
H. Cordes,  
GERMAN, per. Z Anorg Chem, No 306, 1960, pp 121-  
132,  
\*NBS TT 70-57426

Sci-Mat  
Aug 70

Andress, Karl R. and Nachtrab, Reimer.  
THE BOND CONDITIONS IN METAL-POLYPHOS-  
PHATE COMPLEXES. [Pt. 2 of] Complex Formation  
by Sodium Triphosphate with Divalent Metal Ions.  
[1962] 13p. 8 refs.  
Order from SLA \$1.60

62-14975

Trans. of Zeitschrift für Anorganische Chemie  
(East Germany) 1961, v. 311 [no. 1/2] p. 13-21.

DESCRIPTORS: \*Chemical bonds, \*Complex com-  
pounds, \*Metallic compounds, \*Sodium compounds,  
\*Phosphates, Phosphoric acids, Ions, Hydrolysis.

The metal-oxygen (Me-O) compounds such as occur  
in metal-polyphosphate complexes on terminal and  
intermediate  $PO_4$  tetrahedra of phosphate chains are  
discussed in detail. It is found that the stability of  
such Me-O bonds depend primarily on how many free  
(Chemistry--Inorganic, TT, v. 8, no. 6) (over)

62-14975

I. Andress, K. R.  
II. Nachtrab, R.  
III. Title: Complex...

Office of Technical Services

Andress, Karl R. and Nachtrab, Reimar.  
THE COMPLEX-FORMING REACTION BETWEEN  
SODIUM TRIPHOSPHATE AND DIVALENT METAL  
IONS. Pt. 3 of Complex Formation by Sodium  
Triphosphate with Divalent Metal Ions. [1962] 19p.  
3 refs.  
Order from SLA \$1.60                      62-14974

Trans. of Z[eitschrift für] Anorg[anische] Chem[ie]  
(East Germany) 1961, v. 311 [no. 1/2] p. 22-31.

DESCRIPTORS: \*Chemical bonds, \*Complex com-  
pounds, \*Metallic compounds, \*Sodium compounds,  
\*Phosphates, Ions, Chemical reactions, Chemical  
equilibrium.

From the experimentally determined complex forma-  
tion constants of the Me (II)-triphosphate complexes,  
the equilibrium constants for the reaction of the  
formation of this complex were calculated. From the  
(Chemistry--Inorganic, TT, v. 8, no. 6)      (over)

62-14974

I. Andress, K. R.  
II. Nachtrab, R.  
III. Title: Complex...

Office of Technical Services

Hecht, Horstmar.  
THE DEHYDRATION OF METAL-CHLORIDE HYDRATES WITH THIONYL CHLORIDE AND WITH CARBONYL CHLORIDE. 7 Dec 62, 22p. 16 refs.  
Order from SLA \$2.60 63-10561

Trans. of Zeitschrift für Anorganische Chemie (East Germany) 1961, v. 254, p. 37-51.

DESCRIPTORS: \*Dehydration, \*Sulfonyl compounds, \*Chlorides, \*Hydrates, \*Phosgene, Thallium compounds, Metallic compounds.

A method is described for the dehydration of hydrates. The method is based on the fact that the hydrate water is converted by reaction with thionyl chloride or carbonyl chloride into gaseous compounds ( $\text{SO}_2$  or  $\text{CO}_2$  and  $\text{HCl}$ ), which can be separated directly from the anhydrous compounds. The methods are applied to the dehydration of a series of metal chloride hydrates. The preparation (Chemistry--Inorganic, TT, v. 9, no. 11) (over)

63-10561

I. Hecht, H.

Office of Technical Services

Contributions to the Complex Chemistry of the  
Phosphines and Phospine Oxides. IX. Heavy Metal  
Complexes of Tetracyclohexyl Diphosphine, by  
N. Isalsib, G. Schwager, 11 pp.

GERMAN, per, Z. für Anorganische Chemie,  
Vol CCXII, No 1/2, 1961, pp 83-91.

SIA 62-24542

Sci  
Feb 63  
Vol VIII, No 11

222,453

On Hydrogenation of Phosphorous Halides With Metal  
Hydrides<sup>1</sup> (On the Problem of the Existence of a  
Phosphaneoxide  $PH_3O$ ), by Egon Wiberg, Gunther  
Müller-Schiedmayer, 18 pp.

cccVIII

GERMAN, per, Zeit Anorg Chemie, Vol LXXXI, No 1/6,  
1961, pp 352-368.

OT 61-80157  
CIA/FDD XX-1078

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Sci - Chem

172, 461

Nov 61

Goubeau, J. and Ricker, E.  
HYDRAZINE-BORANE AND ITS PYROLYSIS PRODUCTS. 17 Oct 62, 30p. 14 refs.  
Order from SLA \$2.60

63-10585

Trans. of Z[eitschrift für] Anorg[anische] Chem[ie]  
(East Germany) 1961, v. 310, p. 123-142.

DESCRIPTORS: \*Hydrazines, \*Boranes, Pyrolysis,  
Solubility, Dipole moments, Crystal structure, Spectra  
(Infrared).

Hydrazine-monoborane, m. p. 61<sup>o</sup>, is obtained in good yield by the reaction of hydrazine sulfate with sodium borohydride. Its solubilities, dipole moment, crystal structure, and IR spectra were investigated. During pyrolysis, one mole of hydrogen and a portion of the hydrazine are quickly released. Under controlled conditions, H<sub>2</sub>B-NH-NH-BH<sub>2</sub> can be isolated from the reaction. (Chemistry--Organic, IT, v. 10, no. 2) (over)

63-10585

I. Goubeau, J.  
II. Ricker, E.

Office of Technical Services

Contributions to the Complex Chemistry of the  
Phosphines and Phospine Oxides. IX. Heavy Metal  
Complexes of ~~MM~~ Tetracyclohexyl Diphosphine,  
by K. Issleib, G. Schwager, 11 pp.

GERMAN, per, Z. fur Anorganische Chemie,  
Vol CCCXI, No 1/2, 1961, pp 83-91.

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